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## The satisfaction of basic psychological needs and children's reading growth in culturally relevant summer reading contexts

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### ABSTRACT

This study explores students' perspectives on the satisfaction of basic psychological needs in the classroom and the potential effects on their learning growth in a summer reading program. The summer reading program was free for students in grades 1–8 and was designed to prevent reading-level losses during the summer for students from lower-income households or minoritized races or ethnicities. Using a mixed-method design, we tracked students' reading skill growth during the 6-week reading program; we then identified three student pairs with different patterns of change in their reading skills. Through the interview analysis, we explored what learning experiences in the classroom supported the satisfaction of basic psychological needs, especially for successful learners. Based on the findings, we suggest how teachers can support students who face difficulties with reading growth. This study's findings provide insights into autonomous motivation support and positive learning growth based on the self-determination theory.

### ARTICLE HISTORY

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### KEYWORDS

Basic psychological needs; autonomy; relatedness; amotivation; reading growth

Motivation is the driving force towards targeted behaviours; it is well-known that sustained motivation is linked to improved behavioural outcomes (Reeve 2016). Thus, motivation has been an important research topic in enhancing students' learning and improving learning performance (Cook and Artino 2016). Classical motivation theory explains academic motivation with intrinsic versus extrinsic motivation (Deci and Ryan 1985). Especially in reading education contexts, intrinsic motivation means reading for the enjoyment of reading itself. Conversely, extrinsic motivation means students read for external rewards and not for any inherent enjoyment of reading. Ryan, Connell, and Deci (1985) further expanded on classical motivation theory, noting different self-determination continuums in the extrinsic motivation area. Self-determination theory (SDT) focuses more on the students' motivational tendencies and considers their perspectives on social conditions, which either support or frustrate their self-determination (Ryan and Deci 2009).

SDT emphasises that autonomous motivation, accompanied by a high level of self-determination, is a key factor in increasing the targeted behaviour. Conversely, controlled motivation, a low level of self-determination, is less connected to the

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targeted improved performance (Howard et al. 2020; Ratelle et al. 2007; Schaffner and Schiefele 2016); or in some cases, controlled motivations may negatively correlate with autonomous motivations (Guay et al. 2010) and lower achievement (Howard et al. 2020). Supporting effective learning requires understanding the principles of learners' autonomous motivations and examining ways to increase them. Deci and Ryan (2000) suggested the basic psychological needs theory (BPNT), which identifies three psychological needs factors (i.e. autonomy, competence, and relatedness), can promote autonomous reading motivation. As a sub-theory of SDT, BPNT explains that promoting students' autonomous motivation depends on their perceptions of having their basic psychological needs of autonomy, competence, and relatedness satisfied. On this theoretical basis, Deci and Ryan (2000) sought to explore whether differences in the perception of satisfying students' basic psychological needs can provide meaningful clues to their gaps in autonomous motivation and achievement. Vansteenkiste et al. (2019) highlighted that people naturally tend towards experiences linked to their needs satisfaction and psychological well-being; therefore, the three needs components in BPNT can be impactful resources to explain students' positive learning motivation.

This study explored summer reading camp participants' different reading trajectories and factors such as students' initial autonomous motivation and perception of basic psychological needs satisfaction during the *Freedom Schools* reading program. *Freedom Schools* is a six-week free summer reading program that provides learning support for children who have fewer learning opportunities during the summer out-of-school time (Children's Defense Fund n.d). Most of the participants in *Freedom Schools*, which are conducted at sites across the United States, belong to an underrepresented ethnic/racial group and families with low incomes. The reading program encourages students' self-efficacy beliefs about making a difference in themselves, families, communities, and the world using a culturally relevant reading curriculum. The reading curriculum includes reading topics close to the participants' social and cultural contexts, which affirms their identities, and texts written by diverse authors, which encourage them to think critically (Ha and Roehrig, 2022). In culturally relevant educational contexts, underrepresented students can enhance cultural competence and experience academic success (Ladson-Billings, 1995, 2014). This may positively relate to underrepresented students' psychological needs in reading experiences. In the previous studies with underrepresented learner populations, researchers found that supporting students' perceived basic psychological needs positively related to their prosocial behaviour (Alivernini et al. 2021) and positive affect (Alivernini et al. 2019).

The *Freedom Schools* reading program, which is provided free to participants, also aims to support participants reducing the reading achievement gap during the summer who may suffer from summer reading loss. Many reading scholars have highlighted the problem of students' reading loss during the summer (Allington and McGill-Franzen 2015; Kim 2007; Kim and Quinn 2013). Researchers supported that autonomously motivated learning has benefits for positive learning growth (Vansteenkiste et al. 2018; Reeve 2016). Aligning with the idea, we assumed supporting autonomous motivation (i.e. the satisfaction of basic psychological needs) may lead to underrepresented learners' positive reading experiences in the summer program. Above all, considering the culturally relevant reading program contexts, in this study,

we sought to explain why some students had positive gains in reading skills while others did not experience gains or displayed reading loss. Based on students' interviews, we explored which classroom learning experiences may increase their basic psychological satisfaction and support autonomous motivation in reading.

## Background

### *Supporting social and emotional competencies for effective learning*

Promoting social and emotional competencies helps school-aged children engage in learning because in human development, students' social, emotional, and cognitive development influence each other (Cohen 2006; Greenberg et al. 2003; Jones, McGarrah, and Kahn 2019). Cohen (2006) pointed out that creating a climate for learning requires students to learn basic social and emotional skills, such as listening to others, communicating, and developing collaborative capacities for working together. Jones, McGarrah, and Kahn (2019) highlighted that children's social-emotional competencies may grow in supportive classroom relationships. Moreover, building positive relationships in the classroom is key to helping children become well-prepared learners. Reviewing multiple empirical studies' results, Zins et al. (2004) highlighted that when students have learning supports for social-emotional competencies, students tend to motivate themselves with practical learning goals. According to their explanation, building a collaborative learning climate can promote students' learning motivation and improve academic performance in school.

In this study, we focused on supports for social-emotional competencies that may be provided by the learning contexts at *Freedom Schools*, which are intended to increase students' autonomous reading motivation and promote students' sense of community through prosocial classroom climates (Ha & Roehrig, 2022). Because students tend to maintain high intrinsic reading motivation through culturally relevant reading experiences, they are likely to have positive attitudes towards reading even after the summer camp (Roehrig et al. 2018). In terms of equity in education, this summer reading camp offers educational opportunities during off-school periods while also promoting positive changes in students' learning. Multiple empirical studies have reported the relevance between students' autonomous motivation and learning achievement (De Naeghel et al. 2012; Guay et al. 2010; Schaffner and Schiefele 2016; Taboada et al. 2009). Therefore, in this study, we focused on finding which classroom learning experiences may effectively support students' autonomous motivations.

### *Supporting basic psychological needs satisfaction for learning motivation*

Ryan and Deci (2000) theorised in the BPNT that human's autonomous motivation could be encouraged by satisfaction of three basic psychological needs: 1) autonomy, 2) relatedness, and 3) competence. BPNT can be used to explain the link between students' social and emotional competencies and their academic outcomes. First, the learning activities, which intend to foster students' social and emotional competencies, contribute to increasing the students' autonomous motivation. Through these learning experiences, students begin to recognise that they have sufficient choices in their learning activities.

For example, if those learning activities are based on discussion and decision-making activities, it could be linked to promoting learners' 'autonomy'. Decision-making processes encourage students to experience critical as well as creative thinking. Through responsible negotiation and collaborative learning, students can learn how to work together and how to effectively solve problems (Caprara et al. 2000; Zins et al. 2007).

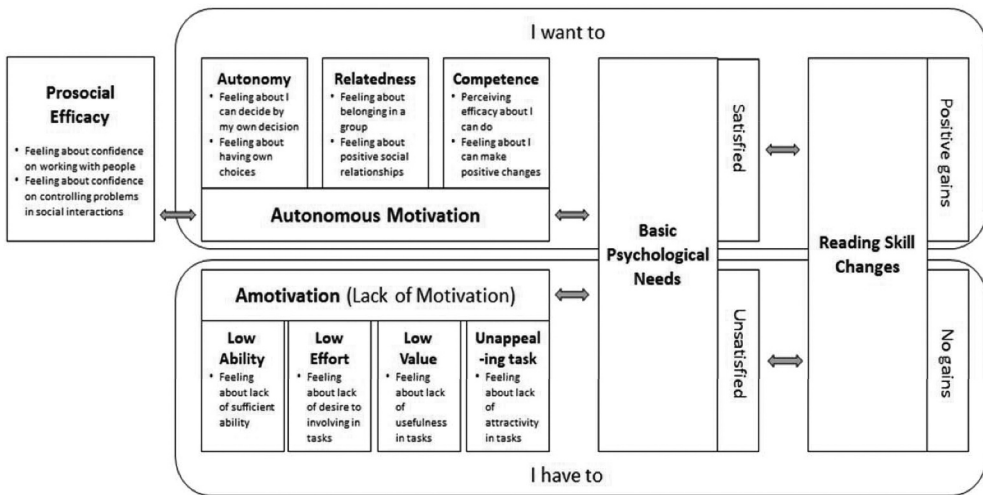
The satisfaction of the need for 'relatedness' also contributes to promoting students' autonomous motivation. Similarly, Baumeister and Leary (1995) pointed out that belongingness (e.g. interpersonal attachment) is a fundamental human motivation. Generally, positive emotions in a classroom are known to contribute to better attention, higher learning motivation, and use of more effective learning strategies (Hancock 2004; Linnenbrink 2007; Pekrun 2014; Xiong et al. 2015). Many empirical studies have pointed out the connection between positive social relationships and successful learning in classrooms (Caprara et al. 2000; Goetz et al., 2007). For example, students' satisfaction with social connections contributes to reducing negative emotions in a classroom, such as anxiety, and fear, and increases coping with stress (Raposa, Laws, and Ansell 2016). Linares et al. (2005) found that teachers who led a learning program supporting social-emotional competencies reported their students becoming more attentive and friendly. Also, those students had higher self-efficacy beliefs about learning.

Previous studies on child reading achievement indicated that teachers' autonomy support is related to students' high self-efficacy as well as reading achievement (Guthrie et al. 2009; Marshik, Ashton, and Algina 2017). Marshik, Ashton, and Algina (2017) found that autonomy support by teachers was positively related to 3<sup>rd</sup>-grade reading achievement scores. Additionally, Guthrie et al. (2009) reported that 5<sup>th</sup>-grade students who experienced reading instruction, which promoted autonomy and relatedness, demonstrated higher self-efficacy and reading achievement (i.e. word recognition and reading fluency) compared to the control group. Many studies commonly support the idea that students' autonomous reading motivation is a meaningful predictor of reading achievement (De Naeghel et al. 2012; Guay et al. 2010; Taboada et al. 2009).

Furthermore, positive feedback from teachers and peers can increase students' competence and bring students the confidence to confront the challenge of their learning tasks (Niemic and Ryan 2009). Multiple empirical studies support that a good classroom climate based on emotional support can bring positive changes to students' self-efficacy beliefs. For example, Wentzel et al. (2010) reported that middle school students' positive perspectives on emotional support, such as interest in the class and their social goal pursuit, were related to their classroom motivation. Also, Griggs et al. (2013) demonstrated that *Responsive Classroom* practices, which focus on social interaction skills and emotional sensitivity, increased their self-efficacy beliefs in maths and science, even for those with high levels of academic anxiety. Thus, supporting social and emotional learning in the classroom may be a catalyst, through satisfaction of students' needs for autonomy, relatedness, and competence, for improving students' learning motivation and achievement.

### **Conceptual model of this study**

Figure 1 shows the conceptual model of the current study. Based on the lens of social-emotional competencies and SDT, we suggested that students, who have higher prosocial



**Figure 1.** Conceptual model of current study.

efficacy and satisfaction about autonomous motivation, may show meaningful reading gains in the reading camp. Alivernini et al. (2021) empirical study with a population of youth in poverty found that students' needs for autonomy and relatedness were linked to prosocial behaviours in the classroom. Their study also supports the idea that a classroom climate that satisfies the three basic psychological needs of underrepresented students is important because, above all, this may encourage young learners' social-emotional and academic development in schools.

We also considered how lacking autonomous motivation (e.g. amotivation) can be negatively related to students' reading skill gains. Amotivation is defined as lacking motivation to participate in activities; it is related to withdrawal or avoidance of effort due to helplessness (Ryan, Connell, and Deci 1985). Cheon and Reeve (2015) explained that when students perceive learning as a given task that they 'have to do' (as opposed to 'want to do'), they exhibit low levels of autonomous motivation and a passive attitude in learning engagement. Scholars have commonly pointed out that amotivation (e.g. lack of motivation) has a negative relationship with students' academic performance (Deci and Ryan 2000; Ratelle et al. 2007). Amotivation comprises subfactors including low ability, low effort, low value, and unappealing tasks, and research demonstrated that students' autonomous motivation is linked to low amotivation (Cheon and Reeve 2015).

### Study purpose and research questions

This study explored how students' perception of psychological needs satisfaction (i.e. autonomy, competence, and relatedness) may explain their different reading skill trajectories. The explanatory design included quantitative and qualitative data collection based on the theoretical frameworks of SDT and its sub-theory of BPNT. First, we investigated participants' initial prosocial efficacy, reading motivation subscales, and basic reading skill changes. Next, we selected six students' interviews based on a purposeful sampling strategy. Qualitative student interview data were collected to explore the potential causes

of different student reading outcomes. We analysed the interviews to explain how supporting students' basic psychological needs impacts their individual reading growth differences. Therefore, the main findings of this study were derived from the qualitative research data through interview analysis. Our analysis was guided by the following research question: How are students' reading experiences and reading skill changes in *Freedom Schools* related to (a) autonomy supports, (b) positive relationships with peers and teachers, and (c) beliefs in their ability to make a difference? We also explored whether students' amotivational tendencies could account for the differences in reading growth between two purposefully sampled groups.

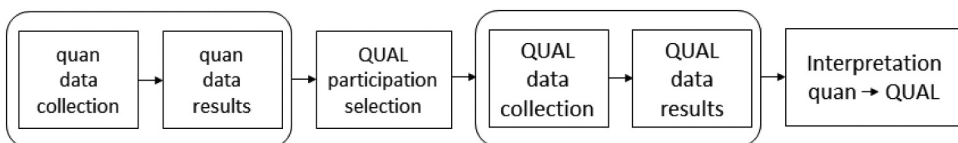
## Method

### Study design

This study followed the explanatory design for the participant selection model (Figure 2), beginning with the quantitative data results used to select participants for the qualitative analysis (Creswell and Plano Clark 2011). Using a mixed-method design can enhance study results through diverse data sources that can be triangulated to support the finding's credibility and accuracy (Creswell 2002). We used both quantitative (i.e. surveys and reading tests) and qualitative data resources (i.e. students' interviews) for the data analyses. The study's findings were integrated from multiple resources through a mixed-method approach (i.e. using the qualitative inductive data-based and quantitative deductive theory-based approach) (Tashakkori and Teddlie 2003). This study mainly focused on the qualitative findings from the interview analysis.

### Participants

We investigated grade 1–8 students' prosocial efficacy, reading motivation, and reading skills at the *Freedom Schools* program, a 6-week summer reading camp. We combined the 2018–2019 summer camp data ( $n = 67$ ). The majority of the participants belonged to groups eligible for free or reduced price lunches (80.5%), and more than 95% of participants were African American. During the 6-week summer reading program's first week, we obtained parental consent to collect surveys and reading tests from the camp participants. During the last week of camp, we conducted a post-test reading skills assessment to compare with the participants' reading baselines. In this study, the quantitative data results were used only for the interview case selection.



**Figure 2.** Explanatory design: participant selection model (Creswell and Plano Clark 2011, 73). *Notes:* In this study, quantitative data results were used for the purposeful interview selection. The results from two different data types were not equally weight.



**Table 1.** Purposeful sampling details for the interview analysis.

| Paring | Class                           | Gender | Case ID (school grade) | Initial Prosocial efficacy at Week 1 (%) | Initial reading motivation at week 1 (Mean)                                | Standardized reading skill changes (Level)                                    |
|--------|---------------------------------|--------|------------------------|--|--|---|
| 1      | Level 2 (grades 3–5)<br>Class A | M      | Andre (completed 3)    | 98.57                                    | Intrinsic. 4.33<br>Identified. 1.00<br>Introjected. 1.00<br>External. 1.00 | Word. -3 -> -1<br>Passage. -2-> 3<br>Comprehension. -1-> 4<br>Total gains: 12 |
|        |                                 | F      | Zoe (completed 3)      | 37.14                                    | Intrinsic. 2.67<br>Identified. 1.67<br>Introjected. 2.50<br>External. 1.67 | Word. 2 -> 3<br>Passage. 2 -> 2<br>Comprehension. 1 -> 1<br>Total gains: 1    |
| 2      | Level 3 (grades 6–8)<br>Class B | F      | Kayla (completed 7)    | 88.57                                    | Intrinsic. 2.33<br>Identified. 3.00<br>Introjected. 3.25<br>External. 4.00 | Word. 1 -> 6<br>Passage. 0 -> 3<br>Comprehension. 0 -> 3<br>Total gains: 11   |
|        |                                 | F      | Nia (completed 7)      | 60.71                                    | Intrinsic. 1.67<br>Identified. 1.67<br>Introjected. 1.00<br>External. 2.67 | Word. 6 -> 6<br>Passage. 7 -> 7<br>Comprehension. 6-> 6<br>Total gains: 0     |
| 3      | Level 3 (grades 6–8)<br>Class C | M      | Xavier (completed 6)   | 92.86                                    | Intrinsic. 3.33<br>Identified. 4.00<br>Introjected. 2.00<br>External. 1.67 | Word. -1 -> 3<br>Passage. 1-> 5<br>Comprehension. 0 -> 4<br>Total gains: 12   |
|        |                                 | F      | Jada (completed 6)     | 70.00                                    | Intrinsic. 3.00<br>Identified. 2.67<br>Introjected. 3.25<br>External. 2.33 | Word. 3 -> 1<br>Passage. 6 -> 6<br>Comprehension. 6 -> 6<br>Total gains: -2   |

Note. BRI scores represent reading skills standardised by the grade-level of students. A negative number in standardised reading score means that a student's reading level is lower than that expected based on the last completed grade in school.

Table 1 provides details about the students selected for the interview analysis. All identified as African American. We purposefully selected three pairs of students from among the participants according to the survey and reading data. Criteria for selecting interview participants included the following:

- (1) Students had large or little to no changes in their reading level over the 6-week camp participation.
- (2) A pair of students from the same classroom could be identified consisting of one with a large change in reading level and one with little to no change in reading level ( $M_{\text{gains-all}} = .87$ ,  $SD_{\text{gains-all}} = 4.04$ ).
- (3) A pair of students from the same classroom could be identified consisting of one with a higher initial prosocial efficacy and one with a lower initial prosocial efficacy ( $M_{\text{prosocial}} = 80.55$ ,  $SD_{\text{prosocial}} = 14.64$ ).

### Surveys and reading assessments

Students' initial prosocial efficacy was estimated using 12 items rated on a 100-point scale (Roehrig et al. 2018); Cronbach's  $\alpha$  was .83 in the current dataset. Students' initial reading motivation was measured by questionnaires selected from the Academic Self-Regulation Questionnaire (SRQ-A; Deci et al. 1992). The reading motivation survey measures four subfactors on a 5-point Likert scale: intrinsic regulation ( $\alpha = .596$ ; 3 items), identified



regulation ( $\alpha = .778$ ; 3 items), introjected regulation ( $\alpha = .825$ ; 4 items), and extrinsic regulation ( $\alpha = .642$ ; 3 items).

Students' reading skills were tested using the Basic Reading Inventory (BRI; Johns 2012) administered one-on-one with each student by trained researchers. In this study, we estimated students' reading skills in three areas (i.e. word recognition, passage fluency, reading comprehension) and calculated a combined score. Students completed forms A and B of the BRI for the pre-and post-test, respectively. In previous research, the reliability of the BRI using several methods (i.e. internal consistency, test-retest, and form equivalence coefficients) were reported as acceptable values, higher than .80 in all three sub-factors (Bieber, Hulac, and Schweinle 2015). The reading skill scores indicate how the students' reading skill levels varied from those expected at the grade-level they had just completed. A positive score indicates the number of years above grade-level reading ability and a negative score indicates the number of years below grade-level reading ability.

### **Interviews and interview analysis**

Students with consent participated in face-to-face interviews, which were audio-recorded. Among the recorded students' interviews, six were selected in 3<sup>rd</sup>-grade through 7<sup>th</sup>-grade for qualitative data analysis basis on the purposeful sampling (see the section *Participants*). The interviewer asked questions about students' perspectives on social relationships with peers and their teacher in the camp, beliefs about social action (e.g. CRE reading topics), and their perceptions about their camp reading experiences. Specifically, the qualitative findings of this study explored how initial prosocial efficacy and reading motivation differences might relate to their perceptions of reading experiences in the same class and different reading gains. Three trained coders participated in the interview analyses using the software *Nvivo*.

In the first step, we conducted an open coding process to inductively identify coding categories related to students' different reading motivation patterns. The open-codes were layered as axial-codes based on similar concepts and categories, and the initial coding procedures followed a bottom-up approach. In the next step, we explored the learning motivation patterns of interviewees based on their quantitative results and noticed differences in their perceived autonomous reading motivation and emotional responses. The axial-codes then were merged into three related categories (i.e. opinions about learning activities, satisfaction of relationships, and confidence in social action). In the final step, the axial-codes went through a deductive coding procedure regarding the three theoretical constructs of BPNT (i.e. satisfaction of autonomy, relatedness, and competence). In addition, we added the component 'amotivation' in the final code category list; this emerging theme helped to explain the motivation of students whose reading skills did not increase. In summary, we used both inductive (i.e. exploring/describing contents) and deductive (i.e. matching with theoretical constructs) coding procedures during interview analysis (Alivernini, Lucidi, and Manganelli 2008).

To establish the trustworthiness of the coding, three coders shared the individual coding files, and we retained codes that were identified by at least two of the three coders. Through multiple discussions, we merged the results to the main data file, which included only the codes and quotes agreed upon by all three coders. The reported results

of the study reflect our purposeful sample and are organized by four categories (i.e. autonomy, relatedness, competence, and amotivation).

## Results

We found that students with higher reading skill gains tended to have more positive perspectives about their learning experiences related to their psychological needs satisfaction factors (i.e. autonomy, relatedness, and competence) than the other students in the same reading class. On the other hand, the comments of students without reading skill gains included amotivation issues such as low interest or inactivity.

### Autonomy

Students who had positive changes in reading skills commonly expressed positive perceptions of their self-determination in learning activities. For example, Kayla, a Level 3 student who had high gains in reading skills, commented that the teacher respected the students' feelings and was flexible: "I decided to be myself [in the camp] . . . As a couple of weeks went by, I started to act [like] my normal self". Xavier, who had the highest reading skill gains in any Level 3 class, commented that he was fascinated reading the history of African Americans and wanted to read the books in the reading camp. "In *Freedom Schools*, we don't really work on math or science, we focus on the Black history, [class activities] are not really on reading, [we are] adventuring in books... and working on historical books" (Xavier). Andre, a Level 2 student, also showed outstanding reading skill gains during the summer reading camp. At the beginning of the reading camp, his reading baseline was lower than other students who completed grade 3, but in the last week, his reading skill level exceeded the grade 3 students' average score. When asked about his favourite activities at the camp, he replied, "everything I experienced". He was extremely positive in his evaluation of his reading camp experience. "They [the books in the camp] teach very important lessons . . . I want to come back to *Freedom Schools* next year because I'm safe here". His interview comments supported that he truly wanted to be involved in the class activities and enjoyed the various reading experiences.

In contrast, students who showed no gains in reading skills perceived they had less autonomy compared to the positive change group. Two of the three students did not perceive their need for autonomy was satisfied. One student, Zoe, showed indifference in camp activities. She stated that in the reading activities sometimes she did not deeply think about the meanings of the stories. Her participation in the camp activities seemed to be more passive than other students with positive reading gains. Another student, Jada, also stated that this year in *Freedom Schools*, she had a lot of reading and less options in reading activities compared to previous years. Jada said, "last year I think we only had like two- or one-chapter books and now like, the ones in Level 3 like they have all chapter books, so it was a lot". Jada was new to Level 3, so her comment addresses the switch to fewer, longer books for older students in the reading curriculum.

## Relatedness

Distinguishing the perceptions of relatedness between the groups with positive or no changes in reading skill growth was difficult because most students positively commented on their social relations in the reading camp. However, the length of comments about satisfaction in relatedness was aligned with the groups. In particular, students who showed improvement in reading skills provided more elaborate explanations about satisfaction in their relationships. Also, those students tended to mention more often that they experienced caring or kindness in the classroom. The three interviewees who showed outstanding reading skill gains also had high initial prosocial efficacy compared to other camp participants. Considering the survey questionnaires, high prosocial efficacy means that students tend to have confidence in building social relationships and trying to solve problems in a positive manner even in conflict situations with others. Through students' interview comments, we found that high initial prosocial efficacy supported their positive learning motivation in various social relationships in the classroom.

The following quotes came from the students with positive gains in reading skills. Kayla noted in her interview about her favourite part of the camp: "it [collaborative activity] gives me more time to associate with the other people in my class". She enjoyed having the opportunity to work together with her peers on learning activities. Xavier explained that he felt comfortable in the camp "because some of the kids that you meet here, they interest you. You can relate to them", and "[my friends in class] were cool. Learning about them and their opinions and how they act is a good experience". Andre had more complex relationships in the classroom; he thought some classmates disliked him, but he understood this was based on personality differences: "they are all kind of their own personalities . . . they dislike me". However, he commented on a positive view about his relationship with one classmate and with his teacher, whom he described as "kind of funny . . . she is really nice". A good relationship with his teacher even if not with most of his peers might have helped him to engage in reading activities in the camp. Andre was one of the students who showed high initial prosocial efficacy. We found that he could maintain a positive attitude towards learning in the reading camp by focusing more on positive relationships, even if he had some conflict with some peers.

## Competence

*Freedom Schools* summer camp is based on a culturally relevant reading curriculum. The readings focus on how civic engagement and social action can improve the community and the world. The characters in the stories show how their actions can make a difference. In the interview analysis, we focused on the students' comments about their competence regarding social action because we assumed that their reading experience at the camp might cause a difference in their perspectives on competence in making a difference.

Indeed, students' perceptions of social action aligned with whether they had positive or no changes in reading skills. Xavier was one of the students who showed the most overwhelming improvement in reading skills. He liked the morning activity song with motivational lyrics "because it . . . tells us that we can do anything if we like to put our minds to it" (Xavier). In addition to Xavier's experience, Kayla, who also gained in reading skills, showed strong confidence in her effectiveness to change the community through

social actions, stating, “In a community, one thing you could possibly do is go door to door and ask people how they’re doing today or something like that, . . . it makes the world a better place by asking someone how they felt” (Kayla). The books used in the reading curriculum provide inspiration about how one can make positive changes in their world through social actions. Understanding the importance of civic engagement and having confidence in positive community changes by social actions seemed to be related to reading motivation in the camp. On the other hand, after attending the reading camp, Zoe and Nia, who made no progress in reading skills, showed low confidence in making changes in their social community with their actions. As Zoe stated, “I don’t think about how to do it [make a difference in my family]”.

### **Amotivation**

A lack of autonomous motivation can be linked to aspects of amotivation. In this study, we found that amotivation was an important factor that helped explain why some students had no meaningful gains in reading skills compared to others. In the interview analysis, all three students without reading skill gains tended to show amotivation tendencies as well.

All interviews of students who did not make reading skill gains included similar statements related to their indifference about reading. For example, Jada could not identify a good reason why reading in the camp was valuable to her: “They [the books] were like all focusing on one thing so it kind of got boring after time. But I still like books, so it didn’t really matter to me”. Jada showed higher initial reading skills compared to students in the same age group; however, her reading skills had decreased slightly by the last week of camp. Zoe stated that she was indifferent to summer camp activities and the hot weather and early morning chant activity left her tired. We found that her comments were related to low effort issues. For example, she was not energetic enough for camp activities, so she did not put good effort into reading. Nia also said, “I feel like our teachers at school should make teaching fun cause some of my teachers make teaching very boring . . . Kind of hard for me to learn too when class is boring”. This comment showed that she found class activities unappealing, so she was not appropriately motivated from the learning experiences.

On the other hand, such comments were rarely found in the group of students who showed improvement in reading skills. Students with improved reading skill gains commonly showed high satisfaction on three basic psychological needs, and there were few problems related to amotivation issues. On the other hand, students’ expression of high amotivation seemed to be linked to their low satisfaction of basic psychological needs.

### **Discussion**

This study’s findings sought answers to how a learning context that supports students’ basic psychological needs can support improved reading outcomes. The classroom culture supporting students’ autonomous motivation has greater benefits on students’ learning outcomes and positive emotional experiences in schools (Vansteenkiste et al. 2018). We reviewed many studies that reported that promoting autonomous motivation is the key to effective learning for school-aged children (De Naeghel et al. 2012; Guay et al. 2010; Schaffner and Schiefele 2016; Taboada et al. 2009). A common suggestion of these

studies was that collaborative learning opportunities and prosocial classroom climates support underrepresented children's social-emotional competencies in reading contexts and help them maintain high autonomous motivation. *Freedom Schools* is a summer camp that supports students' sense of community and prosocial efficacy while also helping students maintain high autonomous reading motivation. Thus, the *Freedom Schools'* learning context provides a suitable learning environment for explaining autonomous motivation and children's reading growth.

In educational studies focusing on underrepresented students, their social and emotional development and individual well-being need to be explored as primary outcomes (Alivernini et al. 2021; Ha et al. 2021). Motivation researchers also highlighted that understanding basic psychological needs is important, beyond the positive outcomes related to productivity, on individual well-being across all populations of different ages and diverse cultural contexts (Alivernini et al. 2021; Vansteenkiste, Ryan, and Soenens 2020). In recent years, BPNT studies have contributed to expanding topics on general psychological well-being beyond the motivational continuum that was the focus of the SDT (Vansteenkiste, Ryan, and Soenens 2020). More broadly, BPNT expands the educational discourse about promoting 'resilience' and preventing 'demotivating (i.e. need-thwarting)' in classrooms for both students and teachers (Vansteenkiste et al. 2019). The trio of basic psychological needs (i.e. autonomy, competence, and relatedness) provides evidence of fostering potential benefits on learners' engagement, performance, and well-being (Vansteenkiste et al. 2018).

In this study, we focused on how underrepresented students can experience the positive internalisation process (i.e. autonomously motivated in summer reading) based on the BPNT. Thus, we returned to the fundamental question of what increases a learner's autonomous motivation (e.g. fostering students' internalisation process in learning). Based on the BPNT's basic assumption of the three psychological needs requiring support to promote autonomous motivation (Deci and Ryan 2000; Ryan and Deci 2017), we intended to provide meaningful insights on the individual changes in students' reading skills in the summer camp. From the interviews, we found that students with positive perceptions of their psychological needs being satisfied (i.e. in autonomy, relatedness, and competence) also described being more effectively engaged in reading activities at *Freedom Schools*. For example, students with more reading growth, who also had higher initial prosocial efficacy, tended to have more positive perspectives about the opportunities for self-direction in reading activities (i.e. autonomy). These students also described positive relationships with teachers and peers (i.e. relatedness) and commented on how they learned from others. Students learned how people have been trying to change the world for the better in historically themed storybooks. At the camp, students who expressed high confidence in these social actions (i.e. competence) showed reading skill growth. The findings demonstrate how supporting learners' autonomy, relatedness, and competence in classrooms can promote and explain some children's autonomous learning motivation and improved performance (De Naeghel, Van Keer, and Vanderlinde 2014; Deci et al. 1992; Marshik, Ashton, and Algina 2017; Vansteenkiste et al. 2018).

At *Freedom Schools* summer camp, the reading lessons lasted almost three hours every morning, so children's autonomous motivation might be an important factor in their reading skills growth. The paired students, who were interviewed in each class, showed different intrinsic regulation levels at the beginning of the camp. Students with high initial

intrinsic regulation expressed more positive perceptions of their learning experiences compared to students with low initial intrinsic regulation. This study's results support the previous finding that positive perceptions of learning contribute to students' persistence in learning challenges and improved learning performance (Vansteenkiste et al. 2004).

In the interviews, students' descriptions of their experiences at *Freedom Schools* suggest that the collaborative learning context satisfied their need for relatedness. Previous studies have supported the idea that social interaction based on collaborative work helps children engage in learning (Zins et al. 2004). Thus, building a prosocial classroom climate is the first step to promoting productive social interactions (Caprara et al. 2000; Jennings and Greenberg 2009). In a similar sense, various social interactions in the camp, such as discussion and collaborative group activities, may have helped students with high initial prosocial efficacy to maintain their autonomous reading motivation in reading activities. Interviewees who showed higher reading skill growth also had a higher initial prosocial efficacy level. These findings provide a meaningful interpretation of why learning activities that help young students develop social and emotional competencies can positively influence their learning growth (Cohen 2006; Greenberg et al. 2003; Jones, McGarrah, and Kahn 2019).

### **Limitations and future research**

Our results were based on analyses of students' reading assessments, interviews, and self-report surveys of their initial prosocial efficacy and reading motivation. Whereas there is strength in triangulating data collection methods, greater insight could be gained by triangulating between informants (e.g. teacher interviews) or through classroom observations. We recommend that future studies use an in-depth qualitative inquiry into students who do (and do not) experience reading growth at *Freedom Schools*, with various lenses from students, teachers, and parents. In addition, as with most qualitative studies, the interview cases in this study were selected by purposeful sampling, so the findings cannot be generalised to the wider population of students or *Freedom Schools*. For example, the baseline reading scores of five out of six interviewees were at or above grade level at the beginning of the summer. Therefore, the current findings may not be sufficient to explain the motivational principles and changes in the reading skills of students with low initial reading capabilities. Further studies with larger samples are needed to explore how autonomous motivation and prosocial efficacy can explain students' differences in reading growth. Also, in further study, explaining the underrepresented learners' positive reading growth through the lens of culturally relevant education would be a desirable approach (Ladson-Billings 1995, 2014).

### **Conclusion**

For this study, we used a mixed-method design with emphasis on the qualitative results to answer the main research questions. We used the quantitative results for the targeted interview selection to clarify the relationship between supporting autonomous motivation and learners' reading growth. The purposeful sample, a set of paired comparisons, highlights the differences between the students with greater reading growth and those with little or no growth. In the interview analysis, we found subthemes that related to

students' perspectives on basic psychological needs satisfaction. Additionally, we encountered an additional theme that we did not anticipate, amotivation, which also was related to students' different reading outcomes. The comments related to amotivation were only found among the students without reading gains. The amotivational comments were not identified in students with positive reading gains.

We paid special attention to the insights gained by comparing students with different reading growth because teachers need to pay attention to the reasons for students' lack of motivation. Some interviewees, who either lacked improvement or maintained their reading level, showed a good reading baseline with stronger reading skills than the paired-case; however, a lack of motivation might have interfered with their reading activity engagement. Whereas the majority of findings in this study contribute to understanding the motivation of successful learners, understanding the difficulties of students with low learning growth is also a significant finding in this study.

In this study, we applied purposeful sampling methods to pair students with and without positive reading level changes. We then used qualitative data analysis to find the common features of learners who show increased learning growth in the summer reading program. Our results are encouraging, considering that a large portion of students from low-income backgrounds often experience general learning losses during the off-school summer months (Allington and McGill-Franzen 2015; Kim 2007; Petty, Smith, and Kern 2017). We found that positive experiences and satisfaction from relationships with teachers and peers supported students' autonomous reading motivation in those with high initial prosocial efficacy. Prior research has supported that forming good friendships in the classroom helps students to become well-prepared learners in their future (Bergin 2018; Jennings and Greenberg 2009). Students may recognise learning as a pleasant experience in the context of positive social relationships. Thus, our findings suggest that teachers may need to provide learning opportunities for students to build their prosocial efficacy to be able to benefit the most from positive social relationships in classrooms.

## Disclosure statement

We have no financial or non-financial interest that has arisen from the direct applications of this research.

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